

GRANITE COUNTY

FLOODPLAIN RESOLUTION

This document was prepared for the

GRANITE COUNTY PLANNING BOARD

by

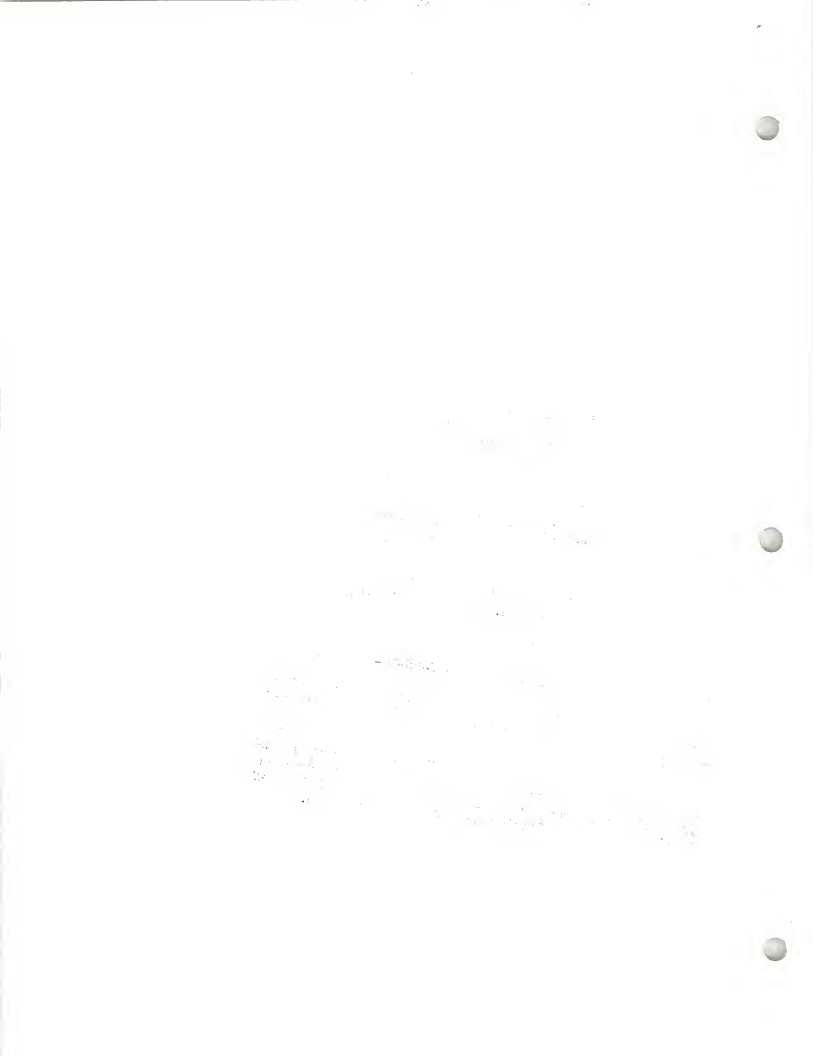
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GRANITE COUNTY FLOODPLAIN RESOLUTION NO. _____

as adopted by
Board of County Commissioners
of
Granite County
April 7, 1976

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1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research.

2. The second part of the report is a detailed description of the methodology used in the study. It includes information about the sample size, the data collection methods, and the statistical analysis techniques.

3. The third part of the report is a discussion of the results of the study. It presents the findings of the research and compares them with the previous studies in the field.

4. The fourth part of the report is a conclusion and a list of references. The conclusion summarizes the main findings of the study and provides recommendations for future research.

5. The fifth part of the report is a list of references. It includes all the sources of information used in the study.

6. The sixth part of the report is a list of references. It includes all the sources of information used in the study.

CHAPTER ITITLE AND PURPOSESection 1.01TITLE

This Resolution shall be known and cited as the Granite County Floodplain Resolution. This Resolution is in accordance with and exercising the authority of the laws of the State of Montana.

Section 1.02PURPOSE

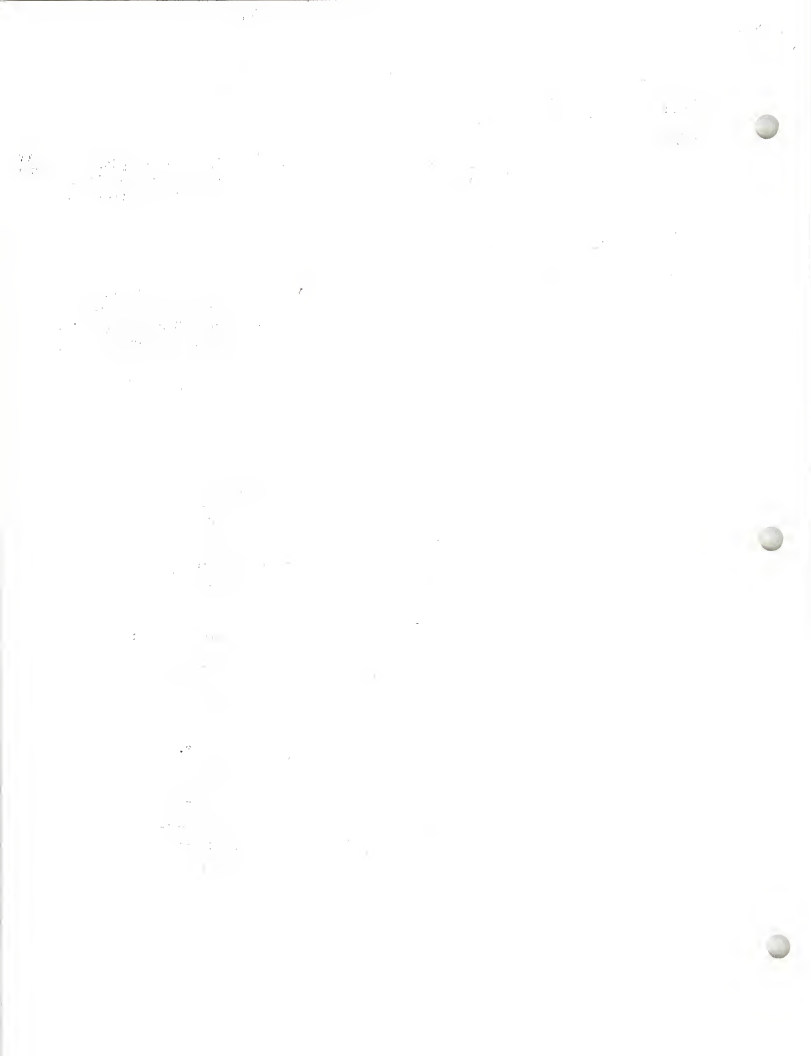
To promote the public health, safety, and general welfare, to minimize flood losses in areas subject to flood hazards, and to promote wise use of the floodplain, this Resolution has been established with the following purposes intended:

A. To guide development of the floodway area of the County consistent with the enumerated findings by:

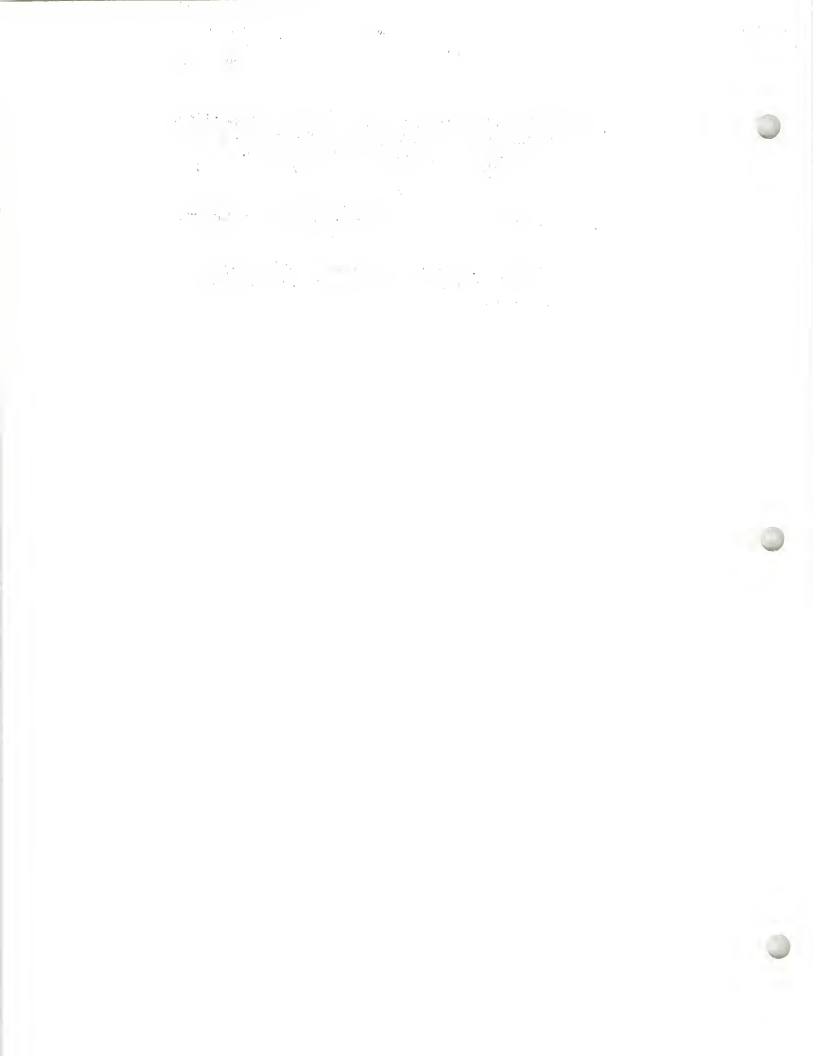
1. Recognizing the right and need of water courses to periodically carry more than the normal flow of water;
2. Participating in coordinating efforts of federal, state, and local management activities for floodway areas; and,
3. Insuring that regulations and minimum standards adopted, insofar as possible, balance the greatest public good with the least private injury.

B. Specifically, it is the purpose of this Resolution to:

1. Restrict or prohibit uses which are dangerous to health, safety of property in times of flood, or cause increased flood heights or velocities;
2. Require that uses vulnerable to floods, including public facilities which serve such uses, be provided with flood protection at the time of initial construction;
3. Develop and provide information to identify lands which are unsuited for certain development purposes because of flood hazards;



4. Distinguish between the land use regulations applied to the designated floodway and those applied to that portion of the designated floodplain not contained within the designated floodway; and,
5. Apply more restrictive land use regulations within the designated floodway.
6. Reduce future expenditure of public funds by minimizing the potential for economic loss.



CHAPTER IIGENERAL PROVISIONSSection 2.01METHODS USED TO ANALYZE FLOOD HAZARD AREAS

Districts as established by this Resolution are defined by the designated floodplains and designated floodways as officially adopted by the Montana Board of Natural Resources and Conservation, Helena, Montana.

Section 2.02JURISDICTIONAL AREA

This Resolution shall apply to all lands within the jurisdiction of the County of Granite, Montana, shown on the Official Floodplain Map as being located within the districts established and defined herein.

Section 2.03ESTABLISHMENT OF OFFICIAL FLOODPLAIN MAP

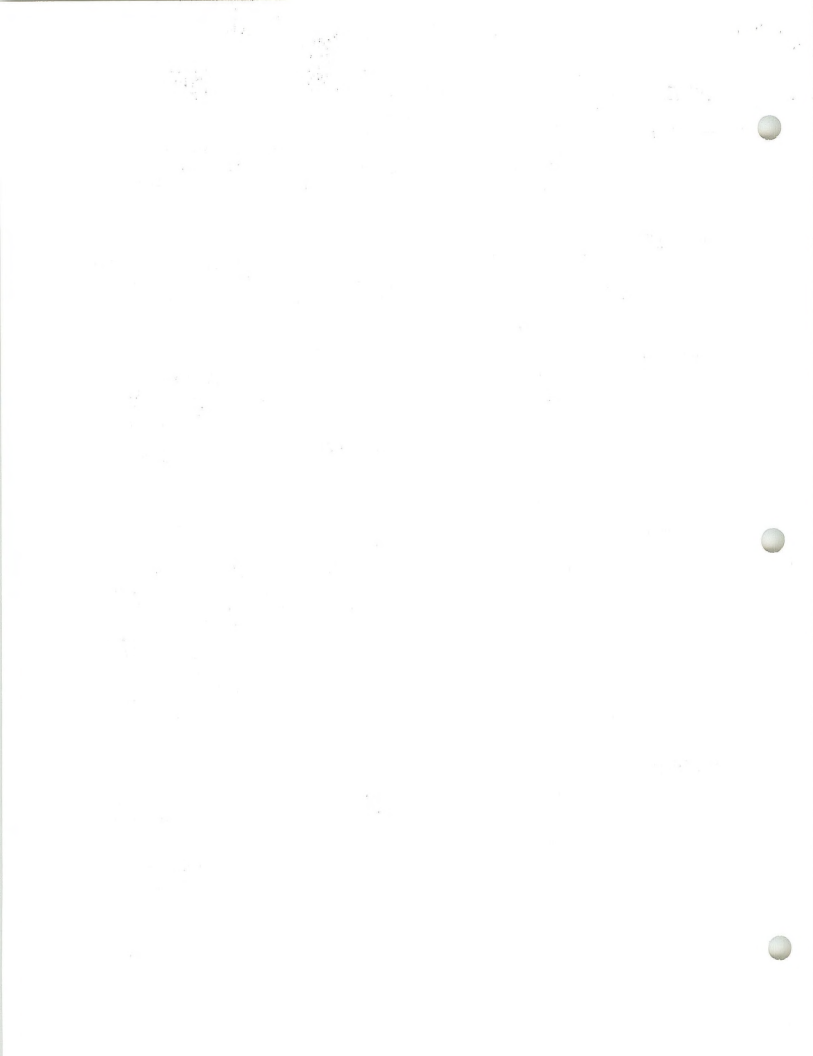
The Official Floodplain Map, together with all explanatory matter thereon and attached thereto, including officially adopted studies, maps, and profiles of the designated floodplains and floodways, are hereby adopted by reference and declared to be a part of this Resolution. The Official Floodplain Map shall be on file in the Office of the Granite County Clerk and Recorder and in the Office of the Granite County Planning Board.

Section 2.04RULES FOR INTERPRETATION OF FLOODPLAIN DISTRICT BOUNDARIES

The boundaries of the designated floodplain and/or designated floodway shall be determined by scaling distances on the Official Floodplain Maps. Where interpretation is needed as to the exact location of the boundaries as shown on the Official Floodplain Maps, the Floodplain Administrator shall request the Department of Natural Resources and Conservation to make the determination. Any person contesting the location of the designated floodplain or designated floodway boundary may present his case and submit his own technical evidence to the Department of Natural Resources and Conservation in accordance with appeals procedures established by that agency.

Section 2.05COMPLIANCE

No structure or land use shall hereafter be used, and no structure shall be located, extended, converted, or structurally altered without full compliance with the terms of this Resolution and other applicable regulations. These regulations meet the minimum requirements as set forth in The Montana Board of Natural Resources and Conservation Administrative Order No. 35-3-3, dated July 26, 1974.



Section 2.06ABROGATION AND GREATER RESPONSIBILITY

It is not intended by this Resolution to repeal, abrogate, or impair any existing easements, covenants, deed restrictions, or underlying zoning. However, where this Resolution imposes greater restrictions, the provisions of this Resolution shall prevail. All other resolutions and ordinances inconsistent with this Resolution are hereby repealed to the extent of this inconsistency only.

Section 2.07INTERPRETATION

In their interpretation and application, the provisions of this Resolution shall be liberally construed in favor of the governing body and shall not be deemed a limitation or repeal of any other powers granted by state statutes.

Section 2.08WARNING AND DISCLAIMER OF LIABILITY

This Resolution does not imply that areas outside the floodplain boundaries or land uses permitted within such areas will always be totally free from flooding or flood damages. Nor shall this Resolution create a liability on the part of, or a cause of action against, the County of Granite or any officer or employee thereof for any flood damages that may result from reliance upon this Resolution.

Section 2.09SEVERABILITY

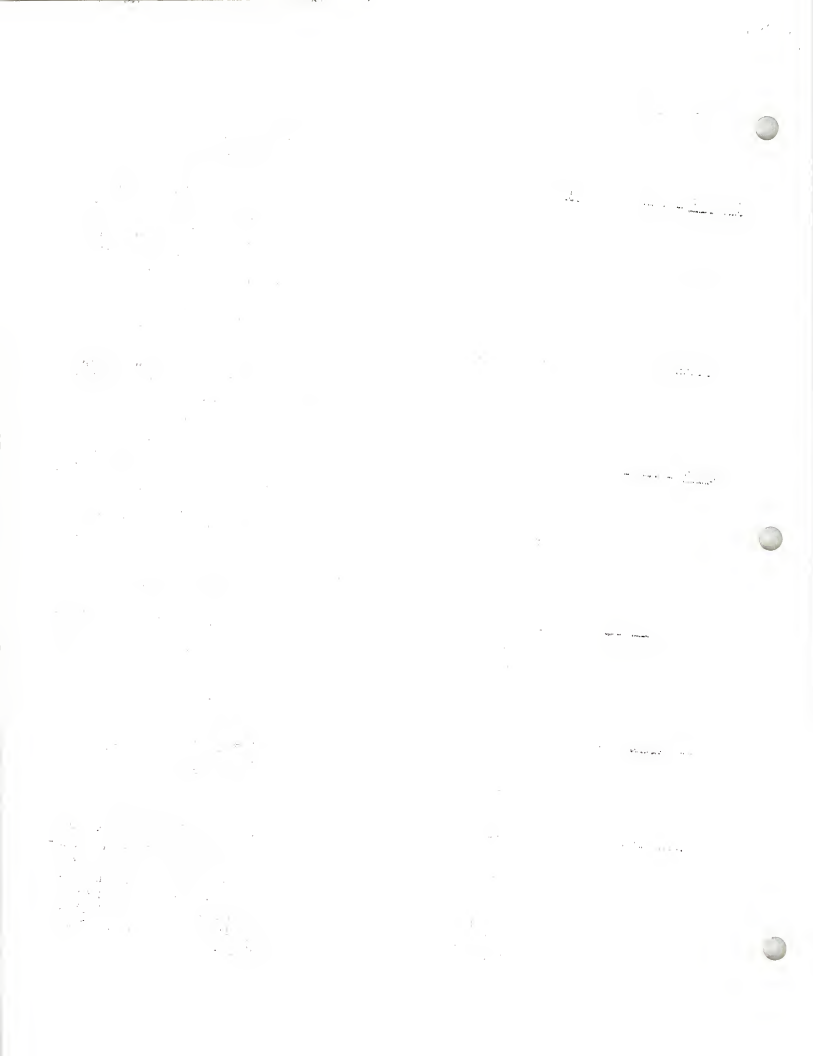
If any section, clause, provision, or portion of this Resolution is adjusted unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Resolution shall not be affected thereby.

Section 2.10PROTECTION OF RESOURCES

No provision of this Resolution shall prevent the complete use, development, or recovery of any mineral, forest, or agricultural resource by the owner thereof.

Section 2.11NOTICE TO PROPERTY OWNERS

Prior to the effective date of this Resolution, all known property owners within the designated floodplain and designated floodway of the proposed district shall be notified by certified mail by the County of Granite, Montana, that their property is located within the designated floodplain or designated floodway and is subject to regulation. A list of all property owners so notified shall be sent to the Department of Natural Resources and Conservation.



Section 2.12DISCLOSURE

All property owners in a designated floodplain or designated floodway must notify potential buyers or their agents that such property is located within the designated floodplain or floodway and is subject to regulation.

Section 2.13DOCUMENTATION OF NONCONFORMING USES

In order to document existing and nonconforming uses, aerial photograph records shall be established for each adopted floodplain district.

Section 2.14DEFINITIONSAccessory Use or Structure

A use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.

Alteration

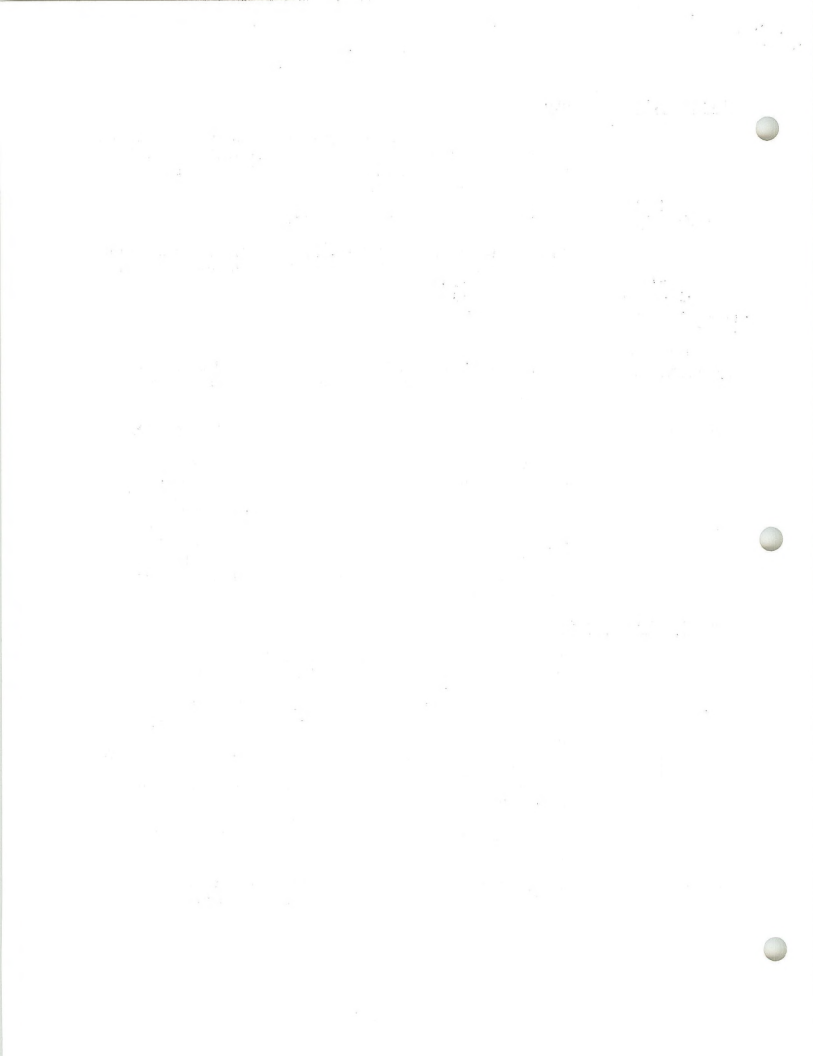
Any change or addition to an artificial obstruction that either increases the size of the artificial obstruction or increases its potential flood hazard. Maintenance of an artificial obstruction is not an alteration. However, the repair, reconstruction, or improvement of an artificial obstruction, the cost of which equals or exceeds fifty (50) percent of the actual cash value of the artificial obstruction either before the improvement is started, or if the artificial obstruction has been damaged and is being restored, before the damage occurred, is an alteration and not maintenance.

Artificial Obstruction

Any obstruction which is not a natural obstruction and includes, but is not limited to, any dam, wall, riprap, embankment, levee, dike, pile, abutment, projection, revetment, expansion, channel rectification, bridge, conduit, culvert, fence, building, refuse, automobile body, fill, or other analogous structure or matter in, along, across, or projecting into any floodplain or floodway which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by the water, or that is placed where the natural flow of the water would carry the same downstream to the damage or detriment of either life or property.

Channel

The geographical area within either the natural or artificial banks of a watercourse or drainway.



Channelization
Project

The excavation and construction of an artificial channel for the purpose of diverting the entire flow of a watercourse or drainway from its established course.

Designated
Floodplain

A floodplain whose limits have been designated and established by order of the Board of Natural Resources.

Designated
Floodway

A floodway whose limits have been designated and established by order of the Board of Natural Resources.

Drainway

Any depression two (2) feet or more below the surrounding land serving to give direction to a current of water less than nine (9) months of the year, having a bed and well-defined banks; provided that in the event of doubt as to whether a depression is a watercourse or drainway, it shall be presumed to be a watercourse.

Establish

To construct, place, insert, or excavate.

Fill, Suitable

Suitable fill shall consist of granular free-draining material placed in compacted layers. Fill slopes shall be no steeper than one vertical and one and one half horizontal and shall be seeded or planted to provide vegetation cover for scour protection. Prior to placing fill, the area shall be stripped of top soil, trees, stumps and other unsuitable foundation material.

Flood

The water of any watercourse or drainway which is above the bank or outside the channel and banks of such watercourse or drainway.

Flood Fringe

That portion of the designated floodplain outside the limits of a designated floodway.

Floodplain

The area adjoining the watercourse or drainway which would be covered by the flood water of a flood of one hundred (100) year frequency.

Floodway

The channel of a watercourse or drainway and those portions of the floodplain adjoining the channel which are reasonably required to carry and discharge the flood water of any watercourse or drainway.

Natural
Obstruction

Any rock, tree, gravel, or analogous natural matter that is an obstruction and has been located within the floodplain or floodway by a non-human cause.

One Hundred (100)
Year Flood

A flood magnitude expected to recur on the average of once every one hundred (100) years, or a flood magnitude which has a one percent (1%) chance of occurring in any given year.

Owner

Any person who has dominion over, control of, or title to an obstruction.

Permit Issuing
Authority

The County of Granite, Montana.

Responsible
Political
Subdivision

The County of Granite, Montana, upon endorsement of this Resolution by the Montana Board of Natural Resources and Conservation.

Riprap

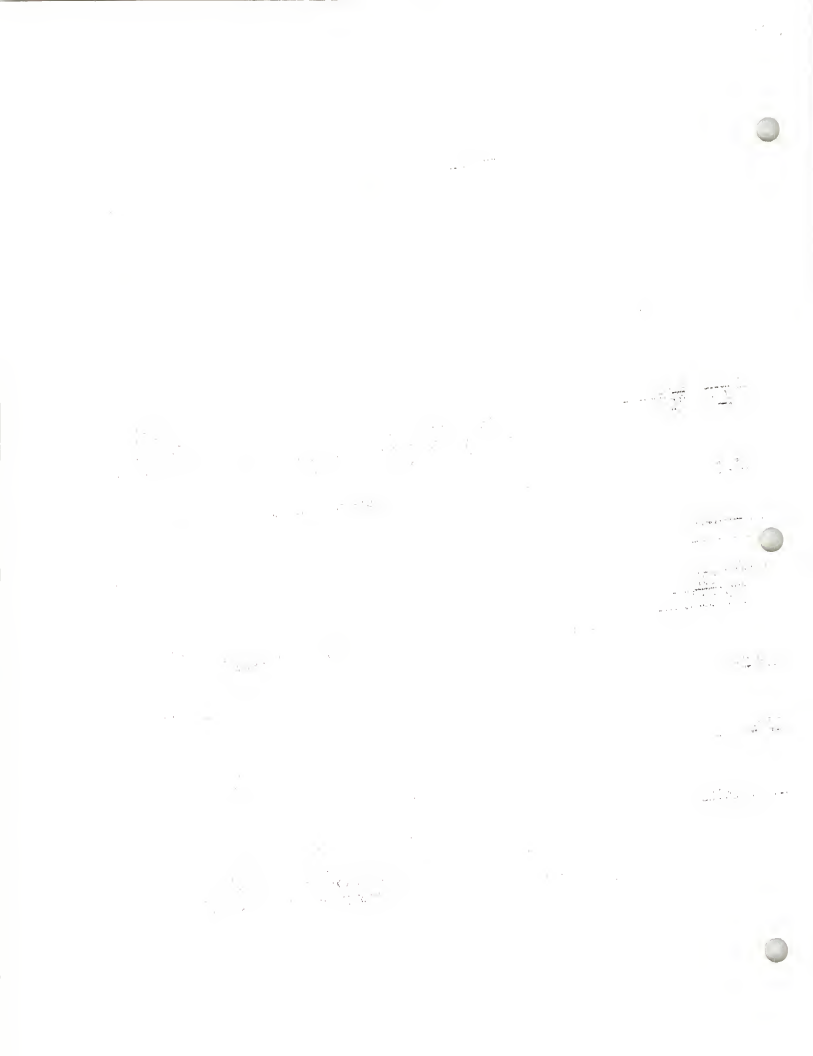
Stones, rocks, concrete blocks, or analogous material that is placed along the banks or bed of a watercourse or drainway for the purpose of alleviating erosion.

Structure

Anything constructed or erected on the ground or attached to the ground, including, but not limited to, buildings, factories, sheds, cabins, mobile homes, and other similar items.

Watercourse

Any depression two (2) feet or more below the surrounding land serving to give direction to a current of water at least nine (9) months of the year, having a bed and well-defined banks; provided that it shall, upon order of the Board of Natural Resources, also include any particular depression which would not otherwise be within the definition of watercourse.



CHAPTER IIIESTABLISHMENT OF DISTRICTSSection 3.01INTENT

It is the intent of this chapter to achieve the stated purposes of this Resolution through the establishment of districts wherein land use is regulated in compliance with Montana's Floodway Management Act of 1974.

Section 3.02DISTRICTS

For the purpose of this Resolution, the following use districts are hereby established:

FP - Floodplain
 FW - Floodway
 FF - Flood Fringe

Section 3.03BOUNDARIES

The boundaries of the districts established by this Resolution coincide with the delineations for the designated floodplains and designated floodways as officially adopted by the Montana Department of Natural Resources and Conservation. Floodplain Districts shall automatically convert to the two district provisions of this Resolution (Flood Fringe District and Floodway District) upon adoption of floodway delineations for the existing Floodplain District.

Section 3.04FP - FLOODPLAIN

A.

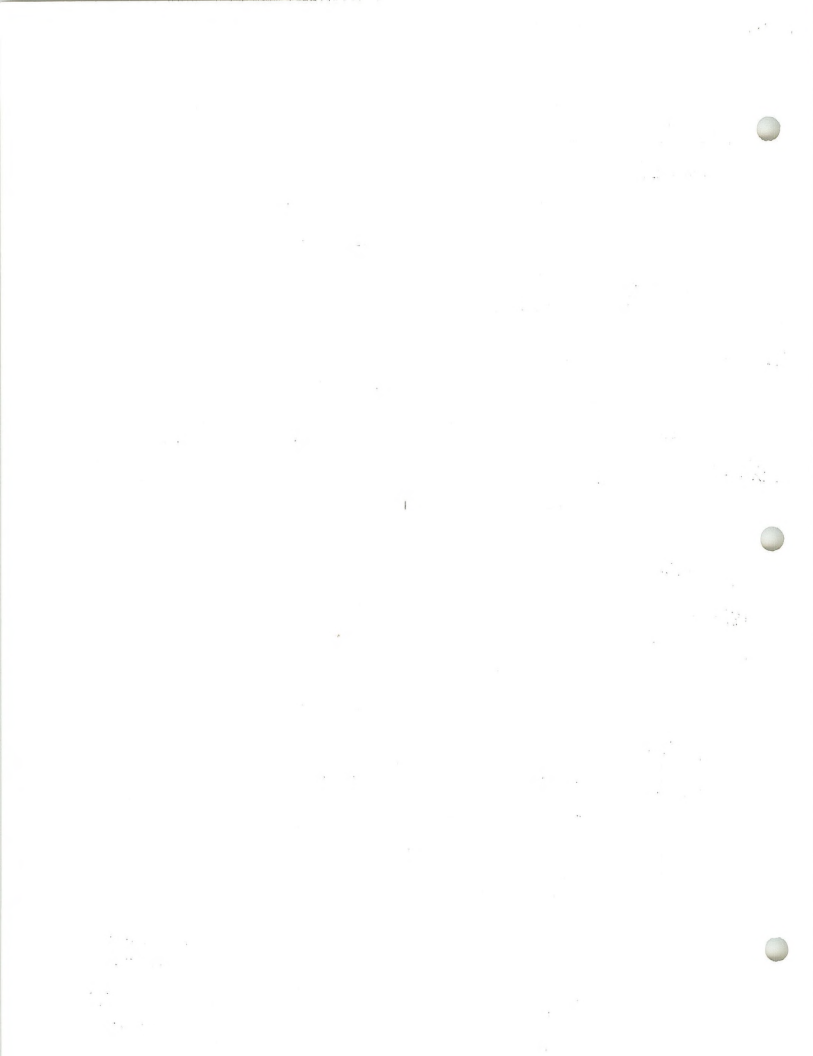
USES ALLOWED WITHOUT PERMITS

All uses allowed in a designated floodway under Section 3.05 (A) without a permit shall also be allowed without a permit in the designated floodplain for which no designated floodway is available.

B.

USES REQUIRING PERMITS

All uses allowed within designated floodways subject to the issuance of a permit shall also be allowed by permit within any designated floodplain for which no designated floodway is available. Such uses shall be subject to the conditions noted in Section 4.01 of this Resolution. In addition, structures including, but not limited to, residential, commercial, and industrial structures, and suitable fill, may be allowed within any designated floodplain for which a designated floodway is not available subject to the issuance of a permit.



C.

PROHIBITED USES

Prohibited uses within designated floodplains for which designated floodways are not available shall be those uses, with the same exceptions, that are prohibited within flood fringe areas as provided in Section 3.06 C.

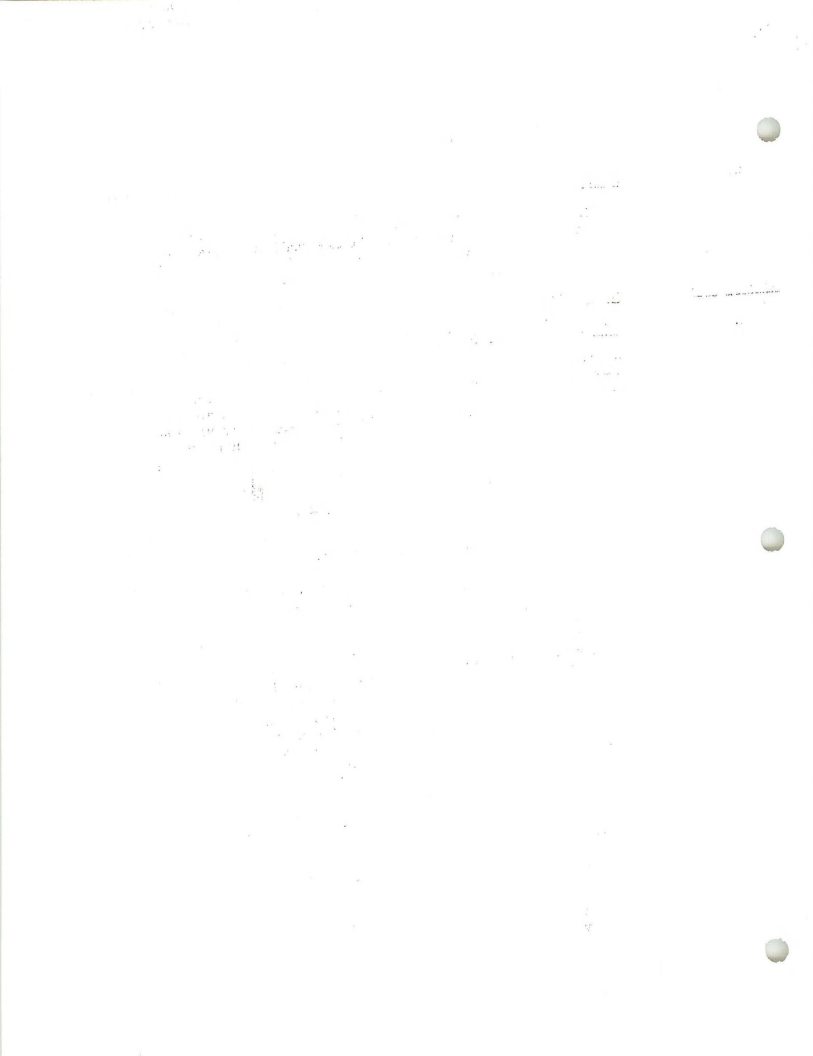
Section 3.05FW - FLOODWAY

A.

USES ALLOWED WITHOUT PERMITS

The following open space uses shall be allowed without a permit anywhere within the designated floodway, provided that such uses conform to the provisions of Section 4.06 of this Resolution, are not prohibited by any other resolution or statute, and do not require structures other than portable structures, fill, or permanent storage of materials or equipment:

1. Agricultural uses;
2. Industrial-commercial uses, such as loading areas, and emergency landing strips;
3. Private and public recreational uses, such as driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife management and natural areas, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking and horseback riding trails, providing that if the anticipated use of any such facilities is for 100 people or more, for a period of two or more hours, then sanitary facilities must be installed at the ratio of one for every anticipated 50 men and one for every anticipated 50 women in accordance with the provisions of Section 3.05 B (7) of this Resolution;
4. Forestry, including processing of forest products with portable equipment;
5. Residential uses, such as lawns, gardens, parking areas, and play areas;
6. Irrigation and livestock supply wells, provided that they are located at least five hundred (500) feet from domestic water supply wells; and,
7. Fences, except permanent fences crossing channels.

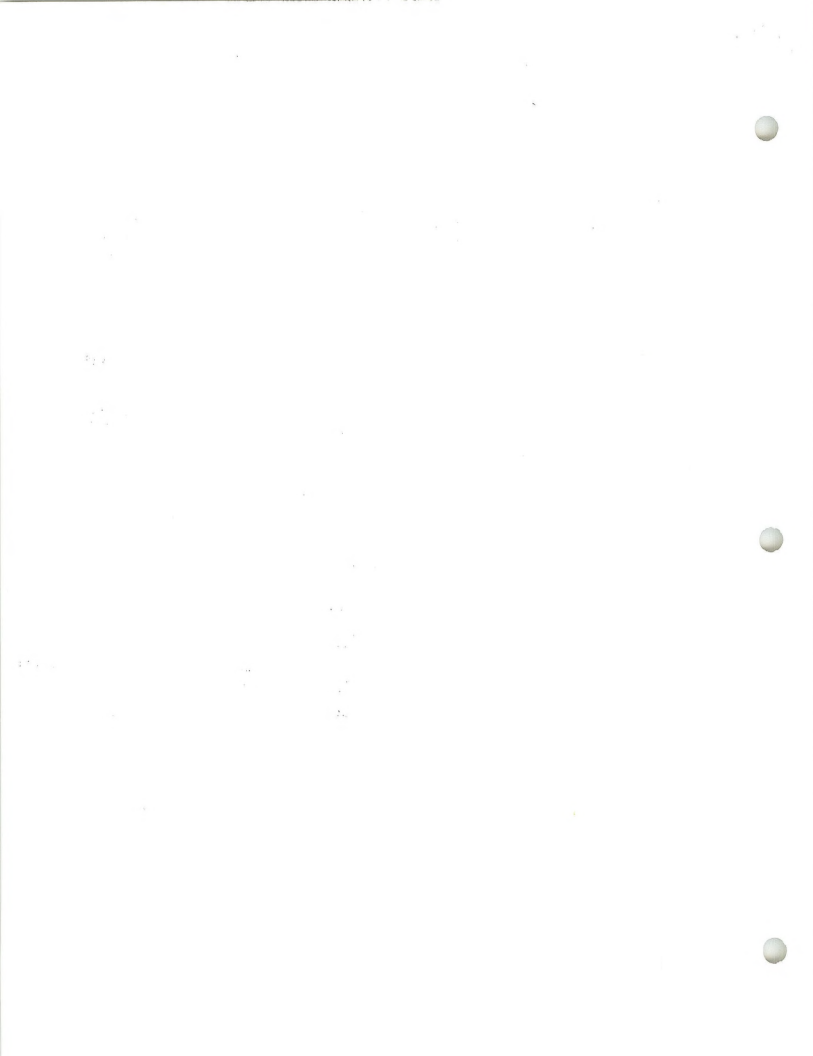


B.

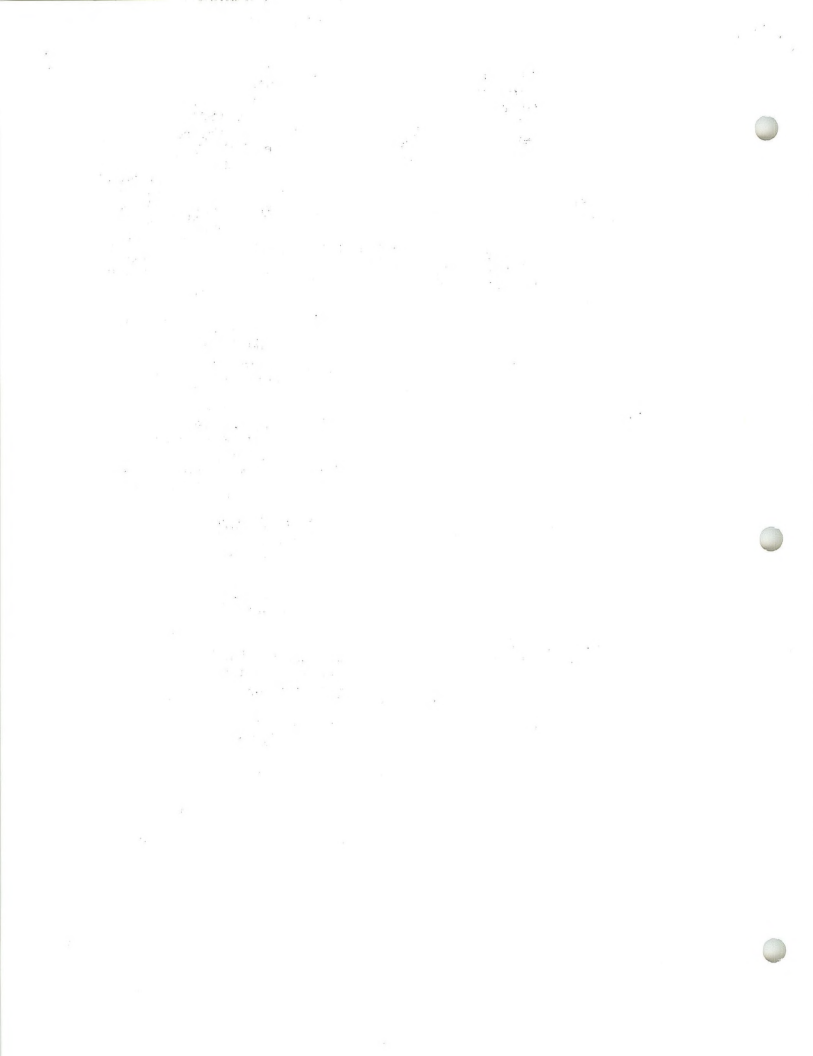
USES REQUIRING PERMITS

The following nonconforming uses and artificial obstructions may be permitted within the designated floodway, subject to the issuance of a permit under the conditions set forth in this Section and Section 4.02:

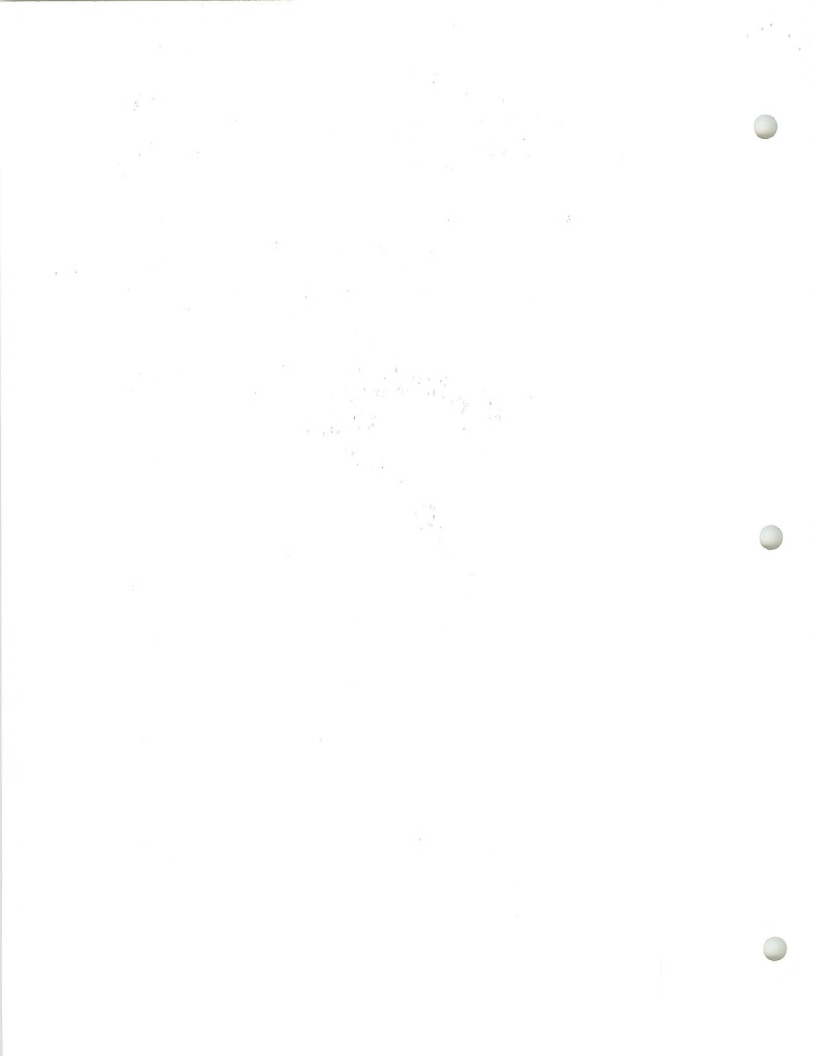
1. Excavation of material from pits or pools, provided that:
 - a. A buffer strip of undisturbed land of sufficient width to prevent flood flows from channeling into the excavation is left between the edge of the channel and the edge of the excavation;
 - b. The excavation meets all applicable laws and regulations of other local and state agencies; and,
 - c. Excavated material is stockpiled outside the designated floodway.
2. Railroad, highway, and street stream crossing, provided that the crossings are designed to offer minimal obstructions to the flood flow.
3. Limited filling for highway, street and railroad embankments not associated with stream crossings, provided that:
 - a. Reasonable alternative transportation routes outside the designated floodway are not available; and,
 - b. Such floodway encroachment is located as far from the stream channel as possible.
4. Buried or suspended utility transmission lines, provided that:
 - a. Suspended utility transmission lines are designed such that the lowest point of the suspended line is at least twelve (12) feet higher than the elevation of the flood of one hundred (100) year frequency;



- b. Towers and other appurtenant structures are designed and placed to withstand and offer minimal obstruction to flood flows; and,
 - c. Utility transmission lines carrying toxic or flammable materials are buried to a depth at least twice the calculated maximum depth of scour for a flood of one hundred (100) year frequency. The maximum depth of scour may be determined from any of the accepted hydraulic engineering methods, but the final calculated figure shall be subject to approval.
5. Storage of materials and equipment, provided that;
- a. The material or equipment is not subject to major damage by flooding and is properly anchored at all times to prevent flotation or downstream movement; or,
 - b. The material or equipment is readily removable within the limited time available after flood warning. Storage of flammable, toxic, or explosive materials shall not be permitted.
6. Domestic water supply wells, provided that:
- a. They are driven or drilled wells located on ground higher than surrounding ground to assure positive drainage from the well;
 - b. Well casings are water tight to a distance of at least twenty-five (25) feet below the ground surface;
 - c. Water supply and electrical lines have a watertight seal where the lines enter the casings;
 - d. All pumps and electrical lines and equipment are either of the submersible type or are adequately flood proofed; and,
 - e. Check valves are installed on main water lines at wells and at all building entry locations.



7. Buried and sealed vaults for sewage disposal in recreational areas, provided that they meet applicable laws and standards administered by the Department of Health and Environmental Sciences and the Granite County Board of Health.
8. Public or private campgrounds provided that:
 - a. Access roads require only limited fill and do not obstruct or divert flood waters; and,
 - b. No dwellings or permanent mobile homes are allowed (camp trailers without wheels or towing vehicles or otherwise not quickly movable are considered permanent mobile homes).
9. Structures accessory to the uses permitted in this subsection, such as boat docks, marinas, sheds, permanent fences crossing channels, picnic shelters and tables, and toilets, provided that:
 - a. The structures are not intended for human habitation;
 - b. The structures will have a low flood damage potential;
 - c. The structures will, insofar as possible, be located on ground higher than the surrounding ground and as far from the channel as possible;
 - d. The structures will be constructed and placed so as to offer a minimal obstruction to flood flows;
 - e. The structures will be firmly anchored to prevent flotation; and,
 - f. Service facilities within these structures, such as electrical, heating, and plumbing facilities, are flood proofed in accordance with Section 4.06 of this Resolution.
10. Golf courses.
11. All other nonconforming uses or artificial obstructions not specifically listed in or prohibited by this Resolution.



C.

PROHIBITED USES

The following artificial obstructions and non-conforming uses are prohibited within the designated floodway:

1. A building for living purposes or place of assembly or permanent use by human beings;
2. A structure or excavation (except as allowed under Section 5.05 B (5) and (9) of this Resolution) that will cause water to be diverted from the established floodway, cause erosion, obstruct the natural flow of water, or reduce the carrying capacity of the floodway;
3. The construction or permanent storage of an object (except as allowed under Section 5.05 B (5) and (9) of this Resolution) subject to flotation or movement during flood level periods;
4. Mobile homes without wheels or towing vehicles or otherwise not readily movable;
5. Commercial buildings;
6. Solid waste disposal and sewer incineration sewage systems, except as allowed or approved under the laws and standards administered by the Department of Health and Environmental Sciences and the Granite County Health Board.
7. Storage of highly toxic, flammable, or explosive materials.

Section 3.06FF - FLOOD FRINGE

A.

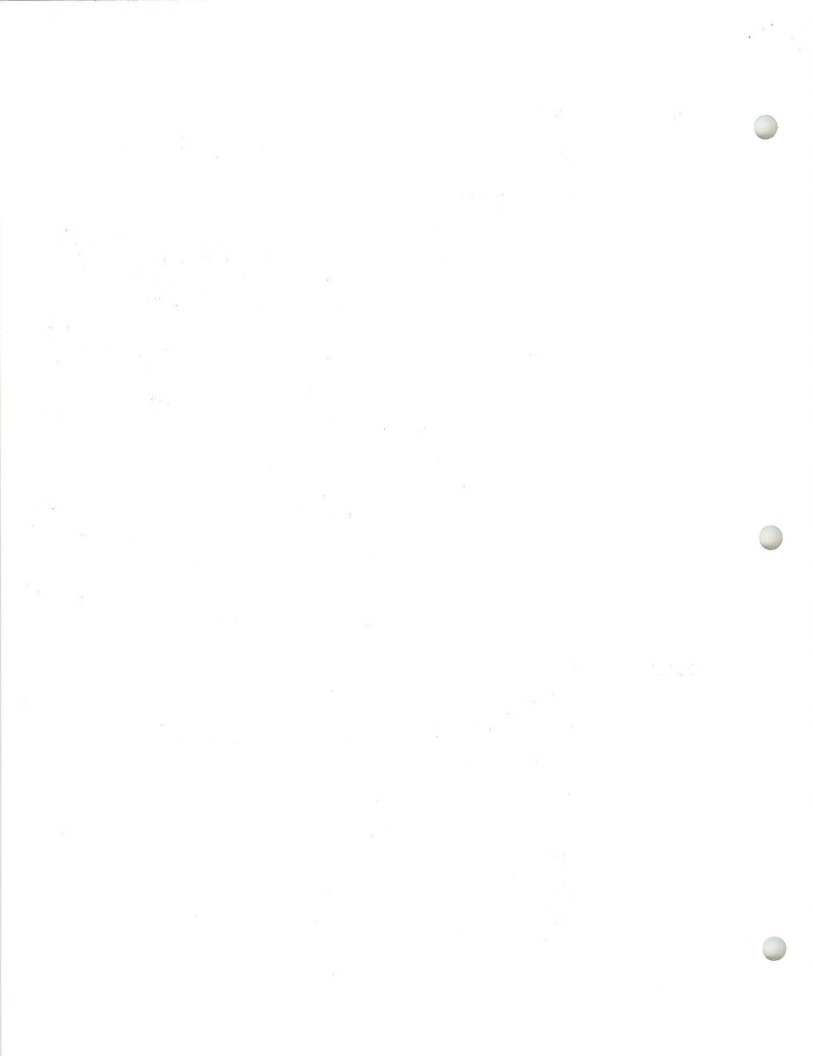
USES ALLOWED WITHOUT PERMITS

All uses allowed in the designated floodway without a permit under Section 3.05 (A) of this Resolution shall also be allowed without a permit in the flood fringe.

B.

USES REQUIRING PERMITS

All uses allowed in the designated floodway subject to the issuance of a permit under Section 3.05 (B) of this Resolution shall also be allowed by permit within the designated flood fringe. In addition, structures including but not limited to residential, commercial, and industrial structures, and suitable fill, shall be allowed by permit within the flood fringe subject to the provisions of Section 3.05 of this Resolution.

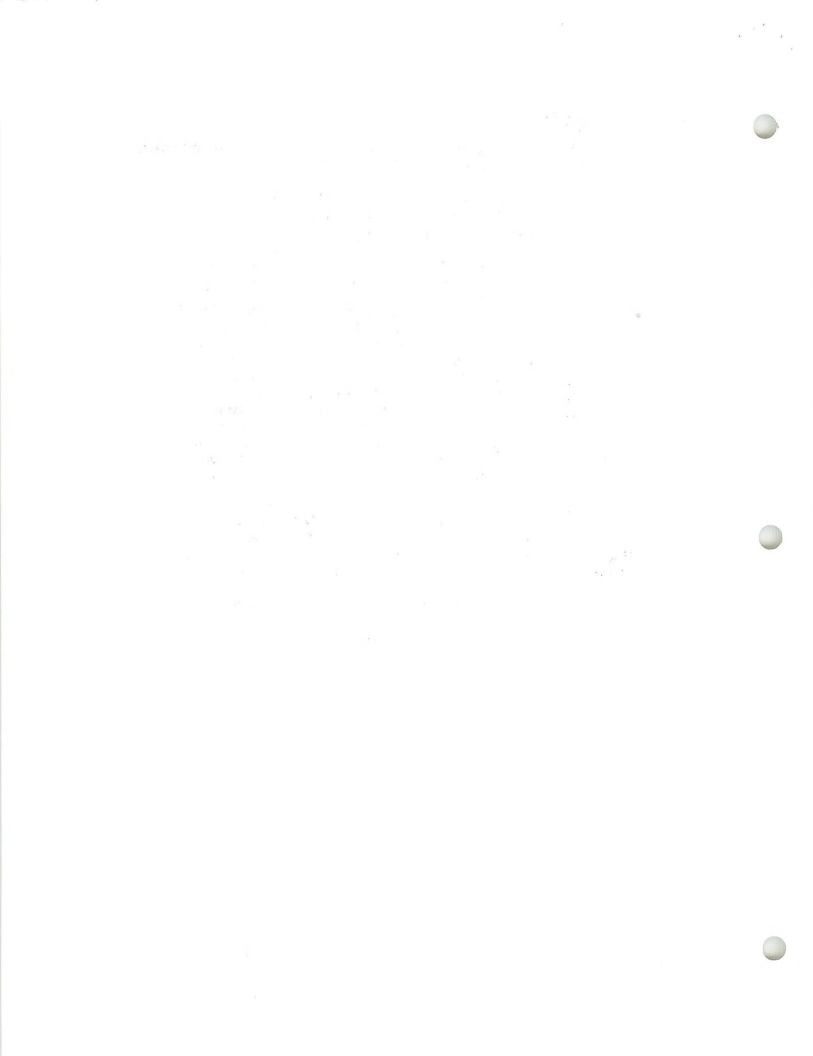


C.

PROHIBITED USES

The following artificial obstructions and non-conforming uses are prohibited within the flood fringe:

1. Individual solid waste disposal and soil absorption sewage systems, except as allowed or approved under laws and standards administered by the Department of Health and Environmental Sciences and The Granite County Board of Health. Solid waste disposed and/or soil absorption sewage systems that are approved and allowed under laws or standards of the Department of Health and Environmental Sciences may be allowed as uses by permit provided the applicant furnished to the Floodplain Administrator a written notice from a responsible official of the Granite Board of Health that such solid waste disposal and/or soil absorption sewage system would not create a health, safety, or pollution problem during flood level periods; and,
2. Storage of highly toxic, flammable, or explosive materials. Storage of petroleum products may be allowed by permit if buried in tightly sealed and constrained containers or if stored on compacted fill at least two (2) feet above the elevation of the flood of one hundred (100) year frequency.



CHAPTER IVPERMIT REQUIREMENTSSection 4.01FLOODPLAIN PERMITS

A.

The following conditions, insofar as each is applicable, shall be attached to each floodplain permit:

1. If the elevation of the flood of one hundred (100) year frequency is available, residential structure must be built on compacted fill as specified in Section 4.03 (3) of this Resolution. If such elevation is not available, the highest known historical flood elevation may be used to establish fill heights;
2. If the elevation of the flood of one hundred (100) year frequency is available, commercial and industrial structures must meet the flood proofing requirements set forth in Section 4.03 (4) of this Resolution. If such elevation is not available, the highest known historical flood elevation may be used to establish flood proofing heights;
3. Proposed structures must be anchored to prevent flotation or collapse and must be located as far from stream channels as is practicable; and,
4. Sanitary sewage systems must be allowed and approved under laws and standards administered by the Department of Health and Environmental Sciences and the Granite County Board of Health prior to any approval given under this Resolution.

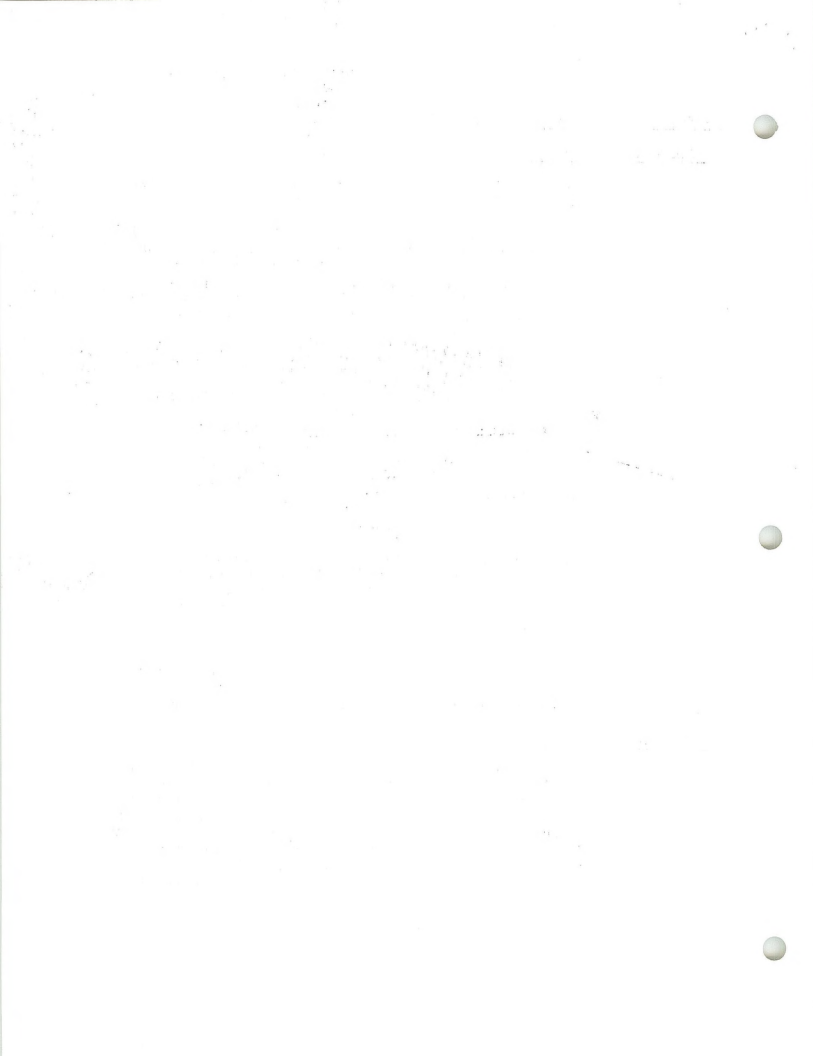
B.

Permits for floodplain developments may be modified or denied if the additional information shows that proposals would increase flood damages to other properties or would cause a threat to the health or safety of its occupants.

Section 4.02FLOODWAY PERMITS

A.

As provided in the Montana Water Use Act of 1973, Sections 89-880 and 89-892, R.C.M. 1947, all new surface water diversion after July 1, 1973, require permits or approval, respectively from the Department of Natural Resources and Conservation. Within designated floodways, the Department of Natural Resources and Conservation shall review each proposed diversion or change in place of diversion to determine if flood flows may be affected. If it appears



that a proposed diversion or change in place of diversion may significantly affect flood flows, the Department of Natural Resources and Conservation may require the applicant to provide additional information and to apply for a permit with the Floodplain Administrator under the Floodway Management and Regulation Act. A permit under the Floodway Management and Regulation Act shall not be granted if, in the judgment of the Floodplain Administrator:

1. The proposed diversion will increase the upstream elevation of the one hundred (100) year flood a significant amount (five-tenths (0.5) feet or as otherwise determined by the Floodplain Administrator);
2. The proposed diversion is not designed and constructed to minimize potential erosion from flooding of a flood of one hundred (100) year frequency; and,
3. Any permanent diversion structure crossing the full width of the stream channel is not designed and constructed to safely withstand up to a flood of one hundred (100) year frequency.

- B. New artificial obstructions or non-conforming uses which increase the elevation of the flood of one hundred (100) year frequency five-tenths (0.5) foot or which increase flood velocities are prohibited.

Section 4.03

FLOOD FRINGE PERMITS

A.

Uses allowed by permit within the flood fringe are subject to the following conditions:

1. Such structures or fill must not be prohibited by any other statute, regulation, ordinance, or resolution;
2. Such structures or fill must be compatible with local comprehensive plans, if any;
3. Residential structures must be constructed on suitable fill such that the lowest finished-floor elevations (including basement) are two (2) feet or more above the elevation of the flood of one-hundred (100) year frequency. The fill shall be at an elevation no lower than the elevation of the flood of one hundred (100)

1. The first part of the report discusses the general situation of the country and the progress of the work. It also mentions the results of the various investigations and the conclusions drawn from them.

2. The second part of the report deals with the specific details of the work, including the methods used, the results obtained, and the conclusions reached. It also mentions the various difficulties encountered and the ways in which they were overcome.

3. The third part of the report discusses the future prospects of the work and the steps that will be taken to carry it out. It also mentions the various organizations and individuals who are assisting in the work.

4. The fourth part of the report discusses the various results of the work, including the various investigations and the conclusions drawn from them. It also mentions the various difficulties encountered and the ways in which they were overcome.

5. The fifth part of the report discusses the future prospects of the work and the steps that will be taken to carry it out. It also mentions the various organizations and individuals who are assisting in the work.

6. The sixth part of the report discusses the various results of the work, including the various investigations and the conclusions drawn from them. It also mentions the various difficulties encountered and the ways in which they were overcome.

7. The seventh part of the report discusses the future prospects of the work and the steps that will be taken to carry it out. It also mentions the various organizations and individuals who are assisting in the work.

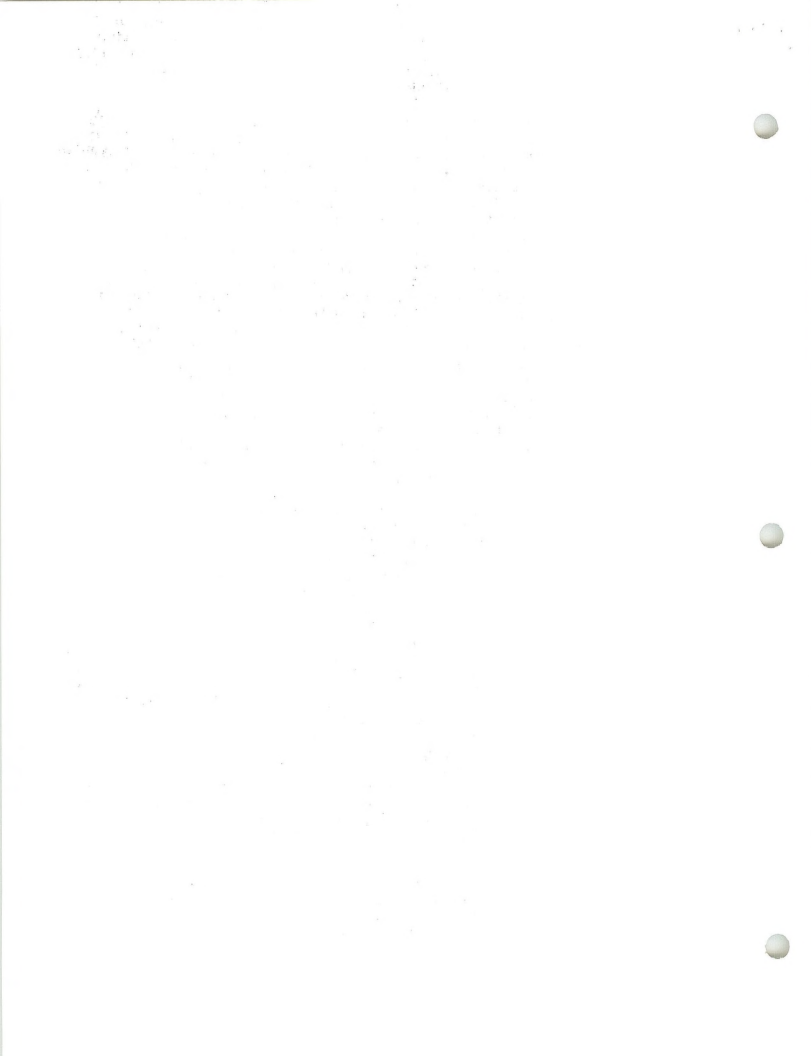
8. The eighth part of the report discusses the various results of the work, including the various investigations and the conclusions drawn from them. It also mentions the various difficulties encountered and the ways in which they were overcome.

9. The ninth part of the report discusses the future prospects of the work and the steps that will be taken to carry it out. It also mentions the various organizations and individuals who are assisting in the work.

10. The tenth part of the report discusses the various results of the work, including the various investigations and the conclusions drawn from them. It also mentions the various difficulties encountered and the ways in which they were overcome.

year frequency and shall extend for at least fifteen (15) feet at that elevation beyond the structure in all directions. Where existing streets, utilities, or lot dimensions make strict compliance with this provision impossible, the Floodplain Administrator may authorize through permit a lesser amount of fill or alternative flood proofing measures. The responsible political subdivision shall notify the Department of Natural Resources and Conservation and receive its approval prior to approving any lesser fill or alternative flood proofing for residential structures;

4. Commercial and industrial structures must be either constructed on full as specified in the preceding sub-paragraph or be adequately flood proofed up to an elevation no lower than two (2) feet above the elevation of the flood of one hundred (100) year frequency. Flood proofing shall be accomplished in accordance with Section 4.06 of this Resolution and shall further include the following:
 - a. If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of two (2) or more feet above the elevation of the flood of one hundred (100) year frequency; and,
 - b. Structures whose lowest floors are constructed for purposes other than parking, loading, or storage of materials resistant to flooding shall be water proofed up to an elevation no lower than two (2) feet above the elevation of the flood of one hundred (100) year frequency. Water proofing shall include impermeable membranes or materials for floors and walls, and water tight enclosures for all windows, doors and other openings. These structures shall be designed to withstand the hydrostatic pressures resulting from a flood of one-hundred (100) year frequency.



5. Roads, streets, highways, and rail lines shall be designed to minimize increases in flood heights. Where failure or interruption of transportation facilities would result in danger to the public health or safety, the facility shall be located two (2) feet above the elevation of the flood of one hundred (100) year frequency; and,
6. Public or private structures and facilities for liquid or solid waste treatment and disposal must be flood proofed to insure that no pollutants enter flood waters. These facilities must be allowed and approved under laws and standards administered by the Department of Health and Environmental Sciences and Granite County Board of Health prior to any approval given by the Floodplain Administrator.
7. Agricultural structures that have a low flood damage potential, such as sheds, barns, shelters, and hay and grain storage structures, must meet the requirements of Section 3.05 (B) (9) of this Resolution.

Section 4.04

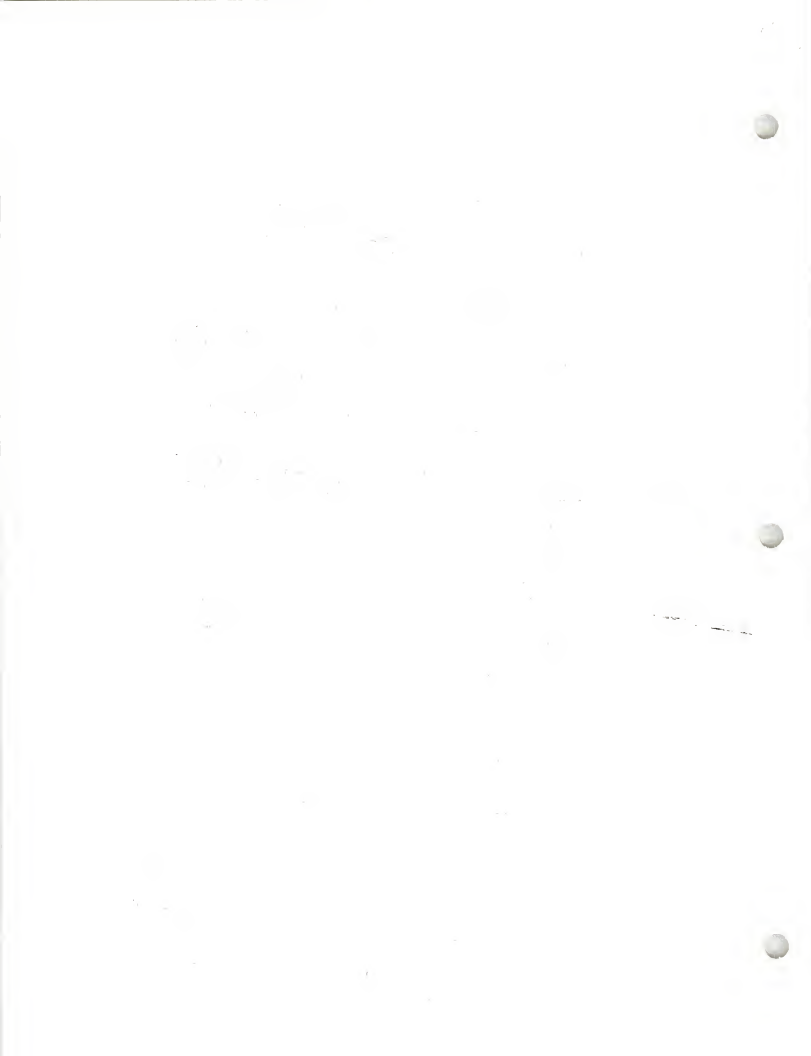
FLOOD CONTROL WORK PERMITS

Since structural flood control works often significantly obstruct and affect floodway flow capacity, the following flood control measures may be allowed within designated floodways subject to the issuance of a permit and the conditions set forth in this Section.

A.

Flood control levees and flood walls if:

1. The proposed levees and flood walls are designed and constructed to safely convey a flood of one hundred (100) year frequency;
2. The cumulative effect of the levees and flood walls combined with allowable flood fringe encroachments does not increase the unobstructed elevation of a flood of one hundred (100) year frequency more than five-tenths (0.5) feet at any point. The Floodplain Administrator may establish either a lower or higher permissible increase in the elevation of the flood of one hundred (100) year frequency for individual levy projects, based upon the following criteria:
 - a. The estimated cumulative effect of other reasonably anticipated future permissible uses; and,

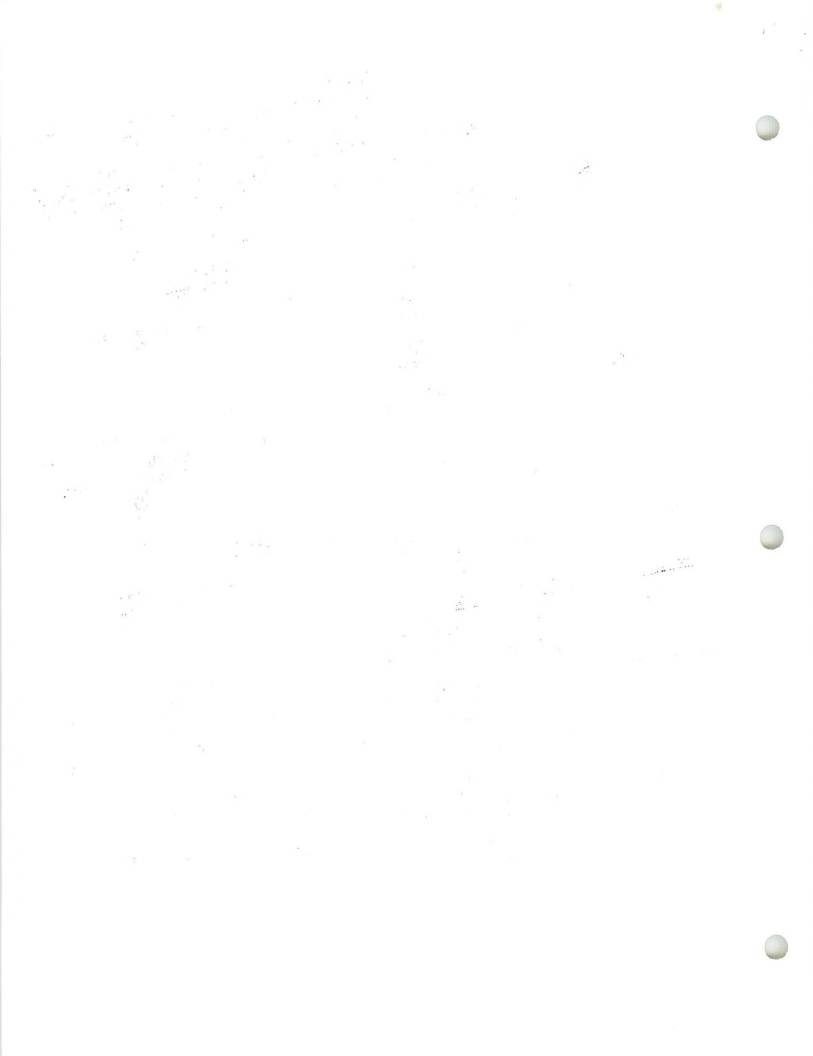


- b. The type and amount of existing flood prone development in the affected area.
- 3. The proposed levees and floodwalls, except those to protect agricultural land only, are constructed at least three (3) feet higher than the elevation of a flood of one hundred (100) year frequency.
- B. Riprap, except that which is hand placed, if:
 - 1. The riprap is designed to withstand a flood of one hundred (100) year frequency;
 - 2. The riprap does not increase erosion upstream, downstream, or across stream from the riprap site; and,
 - 3. The riprap does not increase the elevation of the flood of one hundred (100) year frequency.
- C. Channelization projects if they do not significantly increase the magnitude, velocity, or elevation of the flood of one hundred (100) year frequency downstream from such projects.
- D. Dams, provided that:
 - 1. They are designed and constructed in accordance with approved safety standards; and,
 - 2. They will not increase flood hazards downstream either through operational procedures or improper hydrologic design.

Section 4.05

ADDITIONAL FACTORS

- A. Permits shall be granted or denied by the Floodplain Administrator on the basis of whether the proposed establishment or alteration of an artificial obstruction or nonconforming use meets the requirements of this Resolution. Additional factors that shall be considered for every permit application are:
 - 1. The danger to life and property due to increased flood heights or velocities caused by encroachments;
 - 2. The danger that materials may be swept onto other lands or downstream to the injury of others;



3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions;
4. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
5. The importance of the services provided by the proposed facility to the community;
6. The requirements of the facility for a waterfront location;
7. The availability of alternative locations not subject to flooding for the proposed use;
8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future;
9. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area;
10. The safety of access to the property in times of flood for ordinary and emergency vehicles;
11. The expected heights, velocity, duration, rate of rise and sediment transport of flood waters expected at the site; and,
12. Such other factors which are relevant to the purposes of this Resolution and the Floodway Management and Regulation Act.

Section 4.06

FLOOD PROOFING REQUIREMENTS

A.

All electrical service materials, equipment, and installation for uses permitted with or without a permit in a designated floodplain or floodway shall conform to the following conditions:

1. All incoming power service equipment, including all metering equipment, control centers, transformers, distribution and lighting panels, and all other stationary equipment must be located at least two (2) feet above the elevation of the flood of one hundred (100) year frequency;



2. Portable and movable electrical equipment may be placed below the elevation of the flood of one hundred (100) year frequency, provided that the equipment can be disconnected by a single plug and socket assembly of the submersible type;
3. The main power service lines shall have automatically operated electrical disconnect equipment or manually operated electrical disconnected equipment located at an accessible remote location outside the designated floodplain and above the elevation of the flood of one hundred (100) year frequency; and,
4. All electrical wiring systems installed below the elevation of the flood of one hundred (100) year frequency shall be suitable for continuous submergence and may not contain fibrous components.

B. Heating systems for allowed and permitted floodplain and floodway uses shall conform to the following conditions:

1. Float operated automatic control valves must be installed in supply lines to gas furnaces, so that the fuel supply is automatically shut off when flood waters reach the floor level where the furnaces are located;
2. Manually operated gate valves that can be operated from a location above the elevation of the flood of one hundred (100) year frequency shall also be provided in gas supply lines; and,
3. Electric heating systems must be installed in accordance with subparagraph A of this Section.

C. Plumbing systems for allowed and permitted floodplain and floodway uses shall conform to the following conditions:

1. Sewer lines, except those to buried and sealed vaults, must have check valves installed to prevent sewage backup into permitted structures; and,
2. All toilets, stools, sinks, urinals, and drains must be located such that the lowest point of possible water entry is at least two (2) feet above the elevation of the flood of one hundred (100) year frequency.

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Section 4.07EMERGENCY WAIVER

A.

Emergency repair to and/or replacement of severely damaged public transportation facilities, public water and sewer facilities, and flood control works may be authorized and permit requirements waived if:

1. Upon notification and prior to the emergency repair and/or replacement, the Floodplain Administrator determines that an emergency condition warranting immediate action exists; and,
2. The Floodplain Administrator agrees upon the nature and type of proposed emergency repair and/or replacement.

B.

Authorization to undertake emergency repair and/or replacement work may be given verbally if the Floodplain Administrator feels that a written authorization would unduly delay the emergency work. Such verbal authorization must be followed by a written authorization stating the emergency condition, the type of emergency work agreed upon, and a notation that verbal authorization had been previously given.

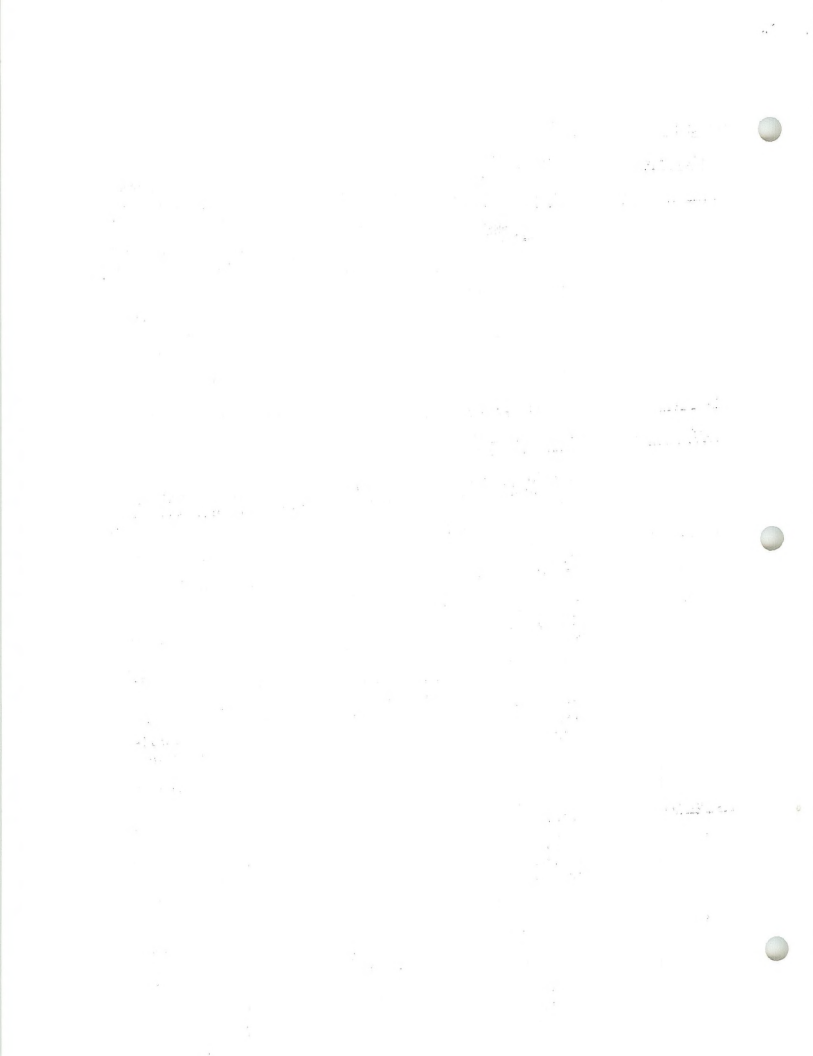


CHAPTER VADMINISTRATIONSection 5.01ADMINISTRATOR

- A. The Floodplain Administrator is hereby appointed with the authority to review permit applications and proposed uses or construction to determine compliance with this Resolution.
- B. The Floodplain Administrator shall adopt such procedures as may be necessary to efficiently administer the provisions of this Resolution.
- C. The Floodplain Administrator charged with the administration of this Resolution shall maintain such files and records as may be necessary to document non-conforming uses, flood elevations, fee receipts, the issuance of permits, agendas, minutes, records of public hearings, and any other matter relating to floodplain management in Granite County. Such files and records shall be open for public inspection. In matters of litigation, the Granite County Attorney may restrict access to specific records.
- D. Copies of all permits granted must be sent to the Department of Natural Resources and Conservation.

Section 5.02PERMIT APPLICATIONS

- A. Uses which require the issuance of a permit, including the expansion or alteration of such uses, shall not be established or undertaken until a permit has been issued by the Floodplain Administrator.
- B. Permit applicants may be required to furnish such of the following as is deemed necessary for determining the suitability of the particular site for the proposed use:
 1. Plans in duplicate drawn to scale or sketched with dimensions shown, showing the nature, location, dimensions, and elevation of the lot, the existing and proposed structures, fill storage of materials, flood proofing measures, and the relationship of the above to the location of the channel;
 2. A surface view plan showing elevations or contours of the existing ground; pertinent structure, fill, or storage elevations; size, location and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets,



water supply, sanitary facilities and; if available, dated photographs showing existing land uses and channel conditions upstream and downstream; and,

3. Specifications for flood proofing, filling, excavating, grading, riprapping, storage of materials, water supply, and sanitary facilities.

C. In addition to the information specified in subparagraph B above, the following information may be required for certain proposed uses in designated floodplains where floodways are not available:

1. A minimum of four (4) surveyed river valley cross-sections as per instructions given in Appendix A, Field Survey Instructions for Flood Hazard Evaluations;
2. A surveyed water surface profile as per instructions given in Appendix A, Field Survey Instructions for Flood Hazard Evaluations;
3. Certification by a qualified professional engineer that flood proofing measures are reasonably adequate to protect against major flood damages; or, a hydrological study documenting probable effect on upstream or downstream property owners.

Section 5.03

EFFECTIVE DATE

A.

A permit application is considered to have been automatically granted sixty (60) days after receipt of the application, except where:

1. The Floodplain Administrator notifies the applicant before the sixtieth (60th) day that the permit is denied;
2. The Floodplain Administrator notifies the applicant that additional hydraulic and survey information is required before acting upon the permit application; and,
3. The permit requires State endorsement as in the case of surface water diversions, variances from approved standards, etc.

THE
FEDERAL
BUREAU OF
INVESTIGATION
OF THE
DEPARTMENT OF JUSTICE
WASHINGTON, D. C.
20535

MEMORANDUM FOR THE DIRECTOR, FBI

SUBJECT: [Illegible]

DATE: [Illegible]

TO: [Illegible]

FROM: [Illegible]

RE: [Illegible]

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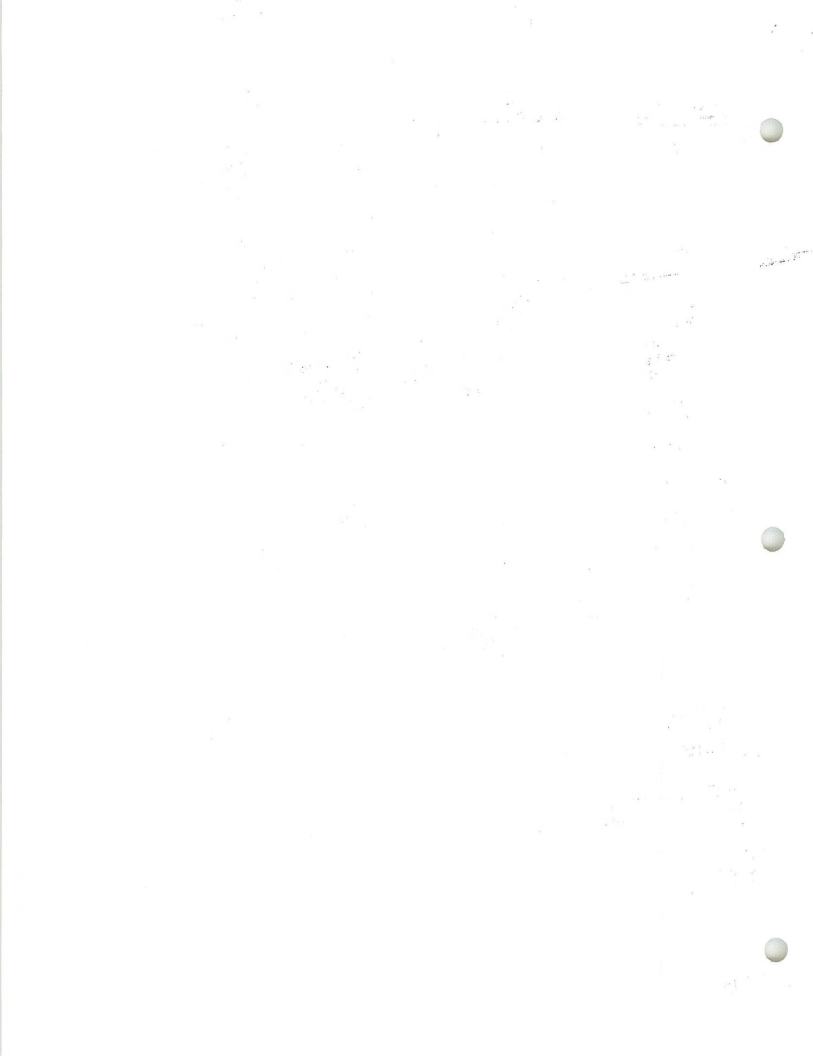
U.S. GOVERNMENT PRINTING OFFICE: 1964

Section 5.04REVIEW-VARIANCES-APPEALS

- A. The Board of Adjustment shall hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by the Floodplain Administrator in the enforcement or administration of this Resolution.
- B. A Board of Adjustment, designated by the Granite County Commissioners may, by variance, grant a permit for the establishment or alteration of an artificial obstruction or non-conforming use that is not in compliance with the minimum standards contained in this Resolution only if:
1. The proposed use would not increase flood heights or flood hazard either upstream or downstream;
 2. Refusal of a permit would, because of exceptional circumstances, cause a unique or undue hardship on the applicant or community involved;
 3. The proposed use is adequately flood proofed;
 4. Reasonable alternative location outside the designated floodplain are not available; and,
 5. Approval of the Department of Natural Resources and Conservation is obtained prior to the approval by the County of Granite of any permit application that is in variance with this Resolution.
- C. Appeals from any decision of the County of Granite or its officers or agencies may be taken by any person or persons, jointly or separately, aggrieved to a court of record.

Section 5.05FEES

A processing fee of fifteen dollars (\$15.00) shall be submitted with each permit application.



CHAPTER VIENFORCEMENTSection 6.01VIOLATION NOTICE

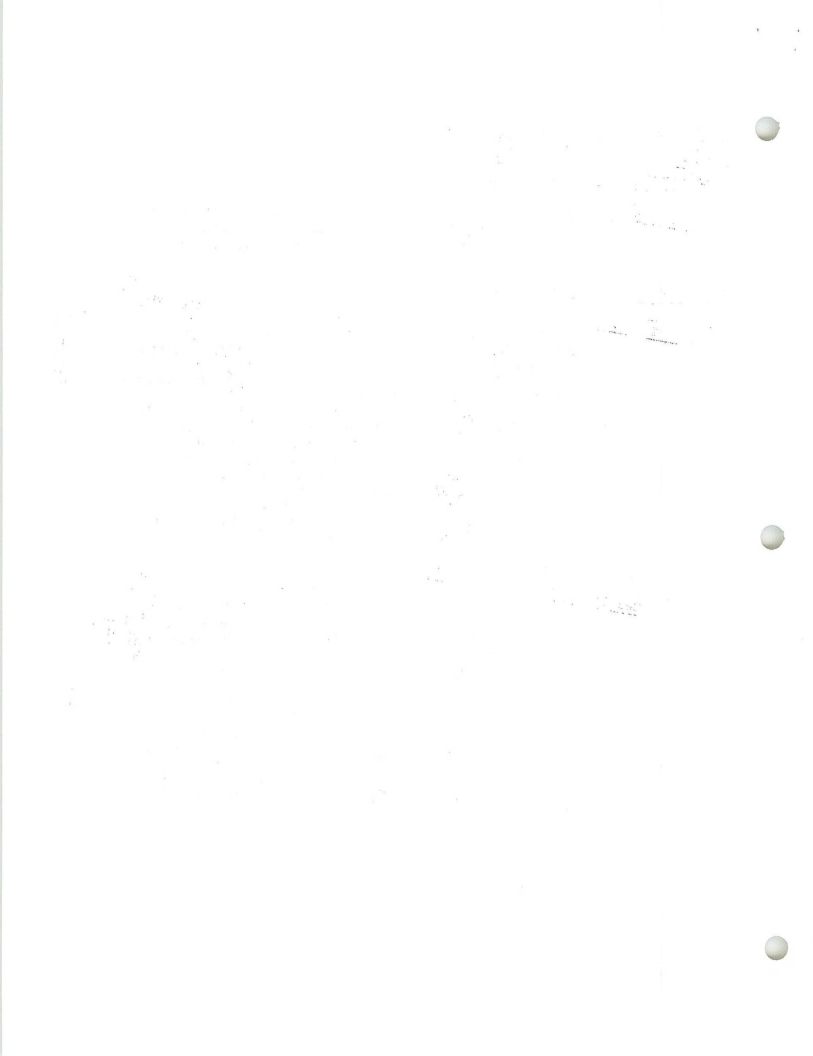
The Floodplain Administrator shall bring any violation of this Resolution to the attention of the Granite County Commissioners and the Granite County Attorney.

Section 6.02COMPLIANCE

Use permits issued on the basis of approved plans and applications authorized only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement, or construction. Any use, arrangement or construction at variance with that authorized shall be deemed a violation of this Resolution, and punishable as provided in Section 6.03. An applicant may be required to submit certification by a registered professional engineer or land surveyor, or other qualified person designated by the Floodplain Administrator that finished fill and building floor elevations, flood proofing, or other flood protection measures were accomplished in compliance with this Resolution.

Section 6.03PENALTIES

Violation of the provisions of this Resolution or failure to comply with any of the requirements (including violations of conditions and safeguards established in connection with variances), shall constitute a misdemeanor. Any person who violates this Resolution or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than one hundred dollars (\$100) or imprisoned for not more than six (6) months or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the County of Granite from taking such other lawful action as is necessary to prevent or remedy any violation.



APPENDIX AFIELD SURVEY INSTRUCTIONS FOR FLOOD HAZARD EVALUATIONS

In evaluating a proposed use within a floodplain for which no floodway has been designated, the Floodplain Administrator may require the applicant to submit the following:

1. Cross Sections. A minimum of four surveyed valley cross sections by a registered land surveyor according to the following field survey instructions:
 - a. The surveys required are cross sections of stream channels and the floodplain on both banks.
 - b. One cross section shall be taken at a point on the stream from which it could be extended through the site.
 - c. Three cross sections shall be taken downstream from the site, each approximately 1,000 feet apart. In no case, however, should the fall in water surface elevation between two sections exceed 5.0 feet. Cross sections should also be taken at all bridge locations in the reach. The cross section farthest downstream should be located at a natural constriction or at a bridge crossing. Cross sections shall be taken at any bridge location between the site and lowest cross section. All bridges in the reach should be described and sketched showing unobstructed waterway openings and elevations.
 - d. Distances between cross sections are to be determined by stadia, and these distances and locations of cross sections shall be shown on the location map.
 - e. The overbank cross sections are to be extended to obtain a vertical rise of fifteen (15) feet above the water surface.
 - f. If a U.S. Geological Survey river gauging station is within the reach of the stream under study, the elevation of any convenient foot mark shall be surveyed and clearly indicated on the location map.
 - g. Elevations of the water surface determined by survey as part of each valley cross section.
 - h. Cross sections should be plotted on ten divisions to the inch cross section paper, using any convenient, identified scale for vertical and horizontal distance.



- i. The elevation of any known high water mark shall be identified and included in the survey.
2. Profile. A profile sheet shall be prepared by a registered land surveyor or registered engineer on cross section paper of ten divisions to the inch, showing the observed water surface profile, location of the cross sections, site boundaries, riverbank profile, and thalweg (lowest point of the channel bottom along the reach of stream).
3. Reference. All surveyed elevations shall be tied to mean sea level datum and the bench mark used shall be identified.

